REMARKS

Claims 1, 3-10, 12-19, and 21-27 are pending in this application. By this Amendment, claims 1, 5-8, 10, 14-17, 19, and 23-26 are amended. No new matter is added. Support for the amendments can be found, for example, in Applicants' pg. 13, line 13 to pg. 14, line 17, pg. 17, line 13 to pg. 18, line 18, and pg. 25, lines 3-7.

The Office Action rejects claims 1, 3-10, 12-19 and 21-27 under 35 U.S.C. §102(b) as being anticipated by Ghosh et al. (U.S. Patent No. 4,498,079). The rejection is respectfully traversed.

The Office Action alleges that Ghosh discloses a three dimensional space where an image is formed by "laying image objects, each composed of two dimensions, length and height, above and below each other along a third dimension, depth, in order to form a final image object over three dimension." The Office Action also alleges that Figs. 22A, 22B of Ghosh show geometry processing to form a three dimensional shape by "providing geometrized edges along image objects defining transparent and opaque regions for use in a perspective image object." Additionally, the Office Action alleges that "texture mapping is performed on objects as discussed above and shown in Figs. 22A, 22B." Applicant disagrees.

These assertions do not address the claim language that the intermediate buffer drawing section temporarily draws an "image of a geometry-processed object in an intermediate buffer" or that a geometry-processing section performs "perspective transformation on an object set in an object space specified in a three-dimensional space" as recited in each of independent claims 1, 5-8, 10, 14-17, 19 and 23-26. Nonetheless, to even further clarify the subject matter of the claims, the independent claims are revised to further clarify these distinctions.

In particular, the independent claims are revised to clarify that the geometry-processing section "performs three-dimensional perspective transformation on an object being

set in an object space specified in a three-dimensional space including calculation of three-dimensional shape data for the object" and that the intermediate buffer drawing section draws an image in an intermediate buffer "using three-dimensional viewpoint information provided in the three-dimensional object space and the three-dimensional shape data calculated by the geometry-processing section."

Thus, the geometry-processing section transforms the three-dimensional shape data of the object based on, for example, a change in perspective view relative to a virtual camera or viewpoint in the three-dimensional object space. The processing occurs in the intermediate buffer.

As admitted, Ghosh merely selects between two-dimensional foreground image and background images and chooses the order to be presented as shown in FIGS. 21-22. These foreground and background image are not three-dimensionally perspectively transformed and three-dimensional shape data for the object is not calculated. Moreover, an image is not drawn in an intermediate buffer using three-dimensional viewpoint information provided in the three-dimensional object space and the three-dimensional shape data calculated by the geometry-processing section. That is, although the final image in the frame buffer of Ghosh may have spatial depth, there is no teaching in Ghosh that the objects drawn in the alleged intermediate buffers are three-dimensionally perspectively transformed relative to, for example, a differing virtual viewpoint in the object space.

Accordingly, because each and every feature of independent claims 1, 5-8, 10, 14-17, 19 and 23-26 is not taught in Ghosh, these claims and claims dependent therefrom are not anticipated by Ghosh.

Moreover, with respect to independent claims 1, 10 and 19, the claims require that the image drawn in the intermediate buffer is set as a texture and that drawing a primitive based on drawing positions is "specified based on three-dimensional information associated with a

position of the object in the object space." The Office Action relies on Figs. 22A and 22B and col. 18, lines 37-48. However, this passage merely allows swapping of object packets to reverse the order of the overlay. There is no setting of the image as a texture and mapping of the texture onto a primitive surface. Thus, for these additional reasons, Ghosh fails to anticipate claims 1, 10, and 19 as well as claims dependent therefrom.

With respect to independent claims 5, 14, and 23, the claims require an "image effect section which performs a given image effect processing on the image on the intermediate buffer before the image drawn in the intermediate buffer is drawn in the frame buffer." For example, in Applicants' FIG. 6 on pg. 21, lines 14-23, pixel exchange, pixel averaging, etc. may be used for an effect such as flaring heat waves. The passage relied upon in Ghosh (col. 15, line 58 to col. 16, line 14) merely allows selection of the order of foreground or background images for the final frame buffer. This does not perform a given effect processing on the image prior to the composite image being drawn in the frame buffer, but instead, merely defines the order of display in the frame buffer. Thus, for these additional reasons, Ghosh fails to anticipate claims 5, 14, and 23 as well as claims dependent therefrom.

With respect to independent claims 6, 15 and 24, the claims require an "image synthesizing section which synthesizes an image drawn in the intermediate buffer at a present frame with another image drawn in the intermediate buffer at a past frame before the image drawn in the intermediate buffer is drawn in the frame buffer." For example, in Applicants' FIG. 9 on pg. 23, lines 14-25, an intermediate image at various past frames can be synthesized into a present frame to change the shape or animate. The passage relied upon in Ghosh (col.15, line 58 to col. 16, line 14) merely discloses foreground and background storage means 610, 620 and selector means 630 for selectively providing output of either foreground or background video data. No images are synthesized prior to being drawn in the frame

buffer. Thus, for these additional reasons, Ghosh fails to anticipate claims 6, 15 and 24 as well as claims dependent therefrom.

With respect to independent claims 7, 16, and 25, the claims recite an "image synthesizing section which synthesizes an image drawn in the intermediate buffer with another image drawn in the frame buffer before the image drawn in the intermediate buffer is drawn in the frame buffer." As discussed above, the passage relied upon in Ghosh (col. 15, line 58 to col. 16, line 14) merely stores two images and selectively outputs one of them for use in the frame buffer. No images are synthesized prior to being drawn in the frame buffer. Thus, for these additional reasons, Ghosh fails to anticipate claims 7, 16 and 25 as well as the claims dependent therefrom.

With respect to independent claims 8, 17, and 26, the claims are amended to recite that "the intermediate buffer drawing section draws the image of the geometry-processed object in the intermediate buffer "only at a discrete subset of all frames" as discussed in Applicants' FIG. 11 on pg. 25, lines 3-7. The passage relied upon in Ghosh (col. 5, lines 5-10) merely states that a double line buffer comprises a foreground generator 10 and a background generator 12. There is no teaching of drawing only a discrete number of frames. Thus, for these additional reasons, Ghosh fails to anticipate claims 8, 17 and 26 as well as claims dependent therefrom.

Accordingly, Applicant respectfully submits that the pending claims obviate the rejection. Withdrawal of the rejection is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the pending claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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JAO:SPC/jnm

Attachment:
Request for Continued Examination
Petition for Extension of Time

Date: September 28, 2007

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